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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,250	03/19/2001	Geoffrey Dive	Q63456	8430

7590

03/11/2004

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EXAMINER

CHANDRASEKHAR, PRANAV

ART UNIT	PAPER NUMBER
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2115

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/810,250

Applicant(s)

DIVE, GEOFFREY

Examiner

Pranav Chandrasekhar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

In multiple instances within the specification the word "yet" as been misspelled as "jet".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abreu et al [US Pat No. 6,014,376] in view of Lundh et al [US Pat No. 6,373,834].

3. As per claims 1,7,8,9,10 and 11, Abreu teaches
transmitting by the first module, a first clock signal generated by its clock generator to the at least one second module [col. 10 lines 49-52. The reference base station is viewed as the first module. The synchronization transmission from the first module is viewed as a first clock signal that has been generated by the clock generator of that module. The mobile station is the second module];

synchronizing the clock generator of the at least one second module with the first clock signal [col. 10 lines 53-54];

transmitting by the at least one second module a second clock signal generated by the clock generator that is synchronized with the first clock signal to the first module [col. 10 lines 54-55. The mobile station is synchronized with a reference base station and now acts as the first module and the unsynchronized base station acts as the second module].

determining by the first module, a first time difference value between the first clock signal and the at least one second clock signal, which time difference value is essentially due to the difference in the local clock values of the first and second modules [col. 10 lines 56-57; col. 6 lines 44-49];

transmitting by the first module, an item of information about the first time difference value to the at least one second module [col. 10 lines 58-59] and

adjusting the clock generator of the at least one second module on the basis of the information about the first time difference value [col. 10 lines 60-63]

Abreu does not explicitly teach the first time difference value being due to the transmission time of the first and the at least second clock signal.

Lundh teaches the first time difference value being due to the transmission time of the first and the at least second clock signal [col. 15 lines 1-14; col. 11 lines 58-61; col. 12 lines 62-64. The ANALYZE-SFC command message is viewed as the signal asserted by the first module to the second module. The ANALYZE_SFC response message is viewed as the signal asserted by the second module to the first module.]

It would have been obvious to one skilled in the art to combine the teachings of Abreu and Lundh to determine an adjustment value that is dependent on the

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transmission time of the signals asserted by the first and second module since the second module receives the local clock signal of the first module a certain time delay after the signal is asserted by the first module. As a result, the local clock of the second module is different from that of the local clock of the first module by a certain delay.

Hence, it is advantageous to use an adjustment factor based on the delay (transmission time) for the second clock in order for the clocks of the two modules to be synchronized.

4. As per claim 2, Abreu and Lundh do not explicitly teach halving the first time difference value to adjust the clock generator of the at least one second module.

It would have been obvious to one skilled in the art to modify the teachings of Abreu and Lundh to calculate a time adjustment factor by halving the first time difference value and adjusting the clock generator of the at least one second module accordingly since it is assumed that the transmission time from the first to the second module and vice versa is the same and the time difference value is based on the transmission times of the two clock signals. Hence, it is evident that half the time difference value is the time delay after which the second clock module received the first clock signal and the second clock generator is adjusted using this time delay.

5. As per claim 4, Abreu further teaches transmitting the first clock signal generated by its clock generator to the at least one second module at predetermined instants of time, in particular cyclically [col. 4 lines 59-64. The mobile station is viewed as the second module. The reference base station is viewed as the first module].

6. As per claim 3, Abreu and Lundh do not explicitly teach at least one second module determining a second time difference value from the first and the second clock signal and wherein the at least one second module transmits an item of information about the second time difference value to the first module.

It would have been obvious to one skilled in the art to modify the teachings of Abreu and Lundh to facilitate the determination of a second time difference value from the first and the second clock signal by the second module following which information about the second time difference value is transmitted to the first module since the second time difference value would serve as an indication to the first module of whether or not the synchronization of the second module clock with the clock of the first module has been successful.

7. As per claim 5, Abreu further teaches retransmitting the first clock signal generated by the clock generator of the first module to the at least one second module at predetermined intervals [col. 4 lines 59-64].

Abreu and Lundh do not explicitly teach the second module determining a second time difference value from the first and the second clock signal and wherein the at least one second module transmits the respective second time difference to the first module, and if the respective second time value deviates from a predetermined value, it adjusts its clock generator on the basis of the respective second time difference value.

It would have been obvious to one skilled in the art to modify the teachings of Abreu and Lundh to retransmit the first clock signal from the first module at predetermined intervals to ensure a state of synchronization throughout the phase of

communication of between the two modules and furthermore, to adjust the clock generator on the basis of a second time difference value determined by the second module in the event of a deviation of this value from a predetermined value in order to reduce the discrepancy between the clocks of the first and second module.

8. As per claim 6, Abreu further teaches

transmitting the first clock signal generated by the clock generator of the first module to the at least one second module at predetermined intervals [col. 4 lines 59-64].

Lundh teaches a first module determining if a first time difference value (calculated by a difference between the first and second clock signal)deviates from a predetermined value and accordingly determining a time adjustment factor [col. 15 lines 1-14] which is transmitted to the second module [col. 15 lines 19-22] following which the second module adjusts its clock generator according to the information received [col. 15 lines 43-49]

Abreu and Lundh do not explicitly teach the second module retransmitting the second clock signal at predetermined intervals.

It would have been obvious to one skilled in the art to combine the teachings of Abreu and Lundh to periodically determine if the two modules are in a state of synchronization and to calculate an adjustment factor based on a discrepancy between the clocks of the two modules to adjust the clock generator of the second module in the event that a calculated time difference value deviates from a predetermined value in order to ensure that the two modules are a in a constant state of synchronization.

9. As per claim 12, Abreu and Lundh do not explicitly teach a computer-readable diskette storing a master program module.

It would have been obvious to one skilled in the art to modify the teachings of Abreu and Lundh to incorporate a computer-readable diskette to store a program module that facilitates synchronization with a clock of another module.

10. As per claim 13, Abreu and Lundh do not explicitly teach a computer-readable diskette storing a slave program module.

It would have been obvious to one skilled in the art to modify the teachings of Abreu and Lundh to incorporate a computer-readable diskette to store a program module that facilitates synchronization with the clock of another module.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

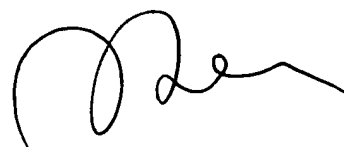
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pranav Chandrasekhar whose telephone number is 703-305-8647. The examiner can normally be reached on 8:30 a.m.-5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on 703-305-9717. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2100.

Pranav Chandrasekhar
March 3, 2004

A handwritten signature in black ink, appearing to read 'Thomas Lee', with a stylized, cursive script.

THOMAS LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100